NEMCHENKO, A.A.; KIRICHENKO, A.M.

Purification of air from dust in sprinkler chambers of hydraulic heaters in mines. Sbor. nauch. trud. KGRI no.23:137-142 '63
(MIRA 17:8)

NEMCHENKO, A.A.; OVCHINNIK, I.T.

Possibilities of heating air in "wet" hydraulic heaters in mines. Sbor. nauch. trud. KGRI no.23:154 '63 (MIRA 17:8)

BARSHCHEVSKIY, M.M.; BEZMOZGIN, E.S.; NEMCHENKO, A.G.; SINEL'NIKOV, A.S.

Experimental-plant testing of a newly designed reactor for the continuous thermal-contact gasification of liquid fuel. Gaz.prom. 5 no.10:12-16 O '60. (MIRA 13:10)
(Liquid fuels) (Gas manufacture and works)

UVAROV, I.P.; PARSHUTKIN, Yu.A.; BALASHOV, N.N.; BOGDANOV, G.A.; BEZMOZGIN, E.S.;
NEMCHENKO, A.G.; YUDKEVICH, Yu.D.; KIPRIANOV, A.I.

Vapor-phase pyrolysis of wood-tar oils. Gidroliz. i lesokhim.
prom. 14 no.8:5-6 '61. (MIRA 16:11)

1. TSentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy institut (for Uvarov, Parshutkin, Balashov, Bogdanov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke i ispol'zovaniyu topliva (for Bezmozgin, Nemchenko, Yudkevich).
3. Leningradskaya lesotekhnicheskaya akademiya im. S.M. Kirova (for Kiprianov).

L 51117-65 EWT(m)/EPF(c)/T Pr-4 WE

27
B

ACCESSION NR: AP5007147 S/0286/65/000/003/0012/0012

AUTHOR: Barshchevskiy, M. M.; Buzmozgin, E. S.; Kurdyukov, O. I.; Nemchenko, A. G.; Yudkevich, Yu. D.

11

TITLE: A method for thermal dissociation of fuel. Class 10, No. 167812

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 3, 1965, 12

TOPIC TAGS: fuel thermal decomposition, infrared radiation

ABSTRACT: This Author's Certificate introduces a method for thermal decomposition of fuel. In order to intensify the process, the dissociation is done under infrared radiation.

ASSOCIATION: none

SUBMITTED: 04Dec63 ENCL: 00 SUB CODE: FP

NO REF SOV: 000 OTHER: 000

Card 1/1

BEZMOZGIN, E.S.; NEMCHENKO, A.G.; YUDKEVICH, Yu.D.

Pilot plant testing of a newly designed reactor for the contact pyrolysis of petroleum products and tars. Trudy VNIIT no.10:49-58 '61. (MIRA 15:3)

(Petroleum products)(Pyrolysis)(Chemical reactors)

BEZMOZGIN, E.S.; UVAROV, I.P.; KIPRIANOV, A.I.; NEMCHENKO, A.G.; YUDKEVICH, Yu.D.

Vapor phase thermal demethylation of wood-tar oils in a contact pyrolysis reactor. Trudy VNIIT no.10:59-63 '61. (MIRA 15:3)
(Wood tar)(Methyl group)(Pyrolysis)

BEZMOZGIN, E. S.; NEMCHENKO, A. G.; SOTNIKOV, M. A.; SHAPIRO, R. N.

Temperature and pressure distribution in the separate zones of shale gas generators. Trudy VNIIT no. 11:35-41 '62. (MIRA 17:5)

SINEL'NIKOV, A. S.; NEMCHENKO, A. G.; GLEZIN, I. L.

Gasification of shredded peat with illuminating gas. Trudy VNIIT no. 11:81-87 '62. (MIRA 17:5)

BEZMOZGIN, E. S.; NEMCHENKO, A. G.; SHAPIRO, R. N.; YUDKEVICH, Yu. D.

Increasing the yield and heating capacity of Shale producer gas. Trudy VNIIT no. 11:97-101 '62. (MIRA 17:5)

BEZMOZGIN, E. S.; NEMCHENKO, A. G.

Distributed blasting in a shale gas generator. Trudy VNIIT
no. 11:78-80 '62. (MIRA 17:5)

BEZMOZGIN, E.S.; NEMCHENKO, A.G.; SINEL'NIKOV, A.[illegible]; YUDKEVICH, Y[illegible].

Contact pyrolysis of shale tar as a method for increasing the yield of low-boiling phenols. Trudy VNIIT no.1[illegible]:97-101 '63. (MIRA 18:11)

NEMCHENKO, A.G.; YUDKEVICH, Yu.D.; BEZMOZGIN, E.S.; GUREVICH, B.Ye.

Contact pyrolisis of shale raw stock as a method for increasing the yield of low-boiling phenols. Report 2. Trudy VNIIT no.13: 86-100 '64. (MIRA 18:2)

YUDKEVICH, Yu.D.; NEMCHENKO, A.G.; BARSHCHEVSKIY, M.M.; [illegible]

Investigating the thermal contact processing of [illegible]
Trudy VNII [illegible] no.13:[illegible] '64.

SUKHANOVSKIY, S.I.; AKHMINA, Ye. [illegible]; PODGORNAYA, T.A.; [illegible]; NEMCHENKO, A.G.; YUDKEVICH, Yu.D.

Contact pyrolysis of the settled tar from the [illegible] of hydrolysis lignin. Gidroliz. i lesokhim. prom. 17 no.5:17-18 [illegible]

(MIRA [illegible])

1. Gosudarstvennyy nauchno-issledovatel'skiy institut [illegible] sul'fitno-spirtovoy [illegible], Akhmina, [illegible].
2. Vsesoyuznyy nauchno-issledovatel'skiy institut [illegible],
Nemchenko, Yudkevich).

L 39405-65 EPA(s)-2/EWA(h)/EWP(j)/EWT(l)/EWT(m)/EEC(t)/T Pc-4/Pt-10/Pz-6/Peb
IJP(c) AT/RM
ACCESSION NR: AP5006060 S/0139/65/000/001/0106/0112

AUTHOR: Kopylov, Yu. A.; Trofimova, T. N.; Stolovitskiy, Yu. M.; Nemchenko, A. M.

TITLE: Investigation of causes of negative photoconductivity in liquid organic semiconductors 6 21

55 B

SOURCE: IVUZ. Fizika, 9 no. 1, 1965, 106-112

21

TOPIC TAGS: organic semiconductor, photoconductivity, negative photoconductivity, photoconductivity quenching

ABSTRACT: An analysis is made of the applicability of explanations of negative photoconductivity in solid semiconductors to liquid binary systems made up of diethyl ether and organic halide derivatives. An experiment performed in the authors' laboratory on a system comprising diethyl ether and one of the halide derivatives of benzene or methane is briefly described and indicates that explanations based on the assumption that the active radiation is absorbed in the surface layer of the semiconductor are not applicable, and that the only usable explanations must be based on the notion of a decrease in carrier density under the influence of radiation. A model previously developed by the authors (Kopylov, Izv.

Card 1/2

L 39405-65
ACCESSION NR: AP5006060

AN SSSR ser. fiz. v. 24, 2, 1960 and Izv. vuzov SSSR, Fizika, no. 6, 1963) is further extended. This mechanism deals with the occurrence of charge carriers, their drift in the electric field, and recombination, and is used to set up equations for the equilibrium states and for the conditions under which positive and negative photoconductivity and temperature or optical quenching of the photoconductivity can be observed. The resultant short-range order model scheme and the equations are in qualitative agreement with the previously performed measurements of the variation of photoconductivity in the investigated liquids. The model incorporates the formal elements of the band model, agrees with the experimentally established presence of nonradiative transitions, and does not contradict any other electric and photoelectric properties of the liquids. Orig. art. has: 1 figure and 7 formulas.

ASSOCIATION: Dnepropetrovskiy inzhenerno-stroitel'nyy institut (Dnepropetrovsk Engineering-Construction Institute)

SUBMITTED: 01Jul63 ENCL: 00 SUB CODE: OP, GC

NR REF SOV: 012 OTHER: 006

Card 2/2

KOPYLOV, Yu.A.; [illegible]ENKO, A.M.

Use of [illegible] methods in the study of the [illegible] conductivity of [illegible] fluids. [illegible] no.[illegible] Jl '65. (MIRA 18:10)

1. [illegible] inzhenerno-stroitel'nyy institut.

NEMCHENKO, A.M.; TULUBOVSKAYA, Ye.Ya.

Carrying out large-scale rat extermination with Isachenko's bacterial culture. Zdrav.Belor. 3 no.10:54-55 O '57.
(MIRA 13:6)

1. Iz Grodnenskoy oblastnoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach V.A. Aleksandrovich).
(GRODNO--RATS--EXTERMINATION)

ROMANETS, R.G. [Romanets', R.H.]; NEMCHENKO, A.M.; BOBYL', V.G. [Bobly', V.H.]

Red boundary of the photoconductivity of ether of ether solutions.
Ukr.fiz.zhur. 6 no.6:803-806 N-D '61. (MIRA 16:5)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut.
(Photoconductivity) (Ether)

KOPYLOV, Yu.A.; NEMCHENKO, A.M.

Regeneration of charge carriers in organic liquids. Izv. vys. ucheb. zav.; fiz. no. 3:50-55 '64. (MIRA 17:9)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut.

L 12467-65 EWT(1)/EPA(s)-2/EWG(k)/EWT(m)/EWP(j)/T Pz-6/Pc-4/Pr-4/Pt-10
AFWL/ASD(a)-5/ESD(dp)/ESD(t) AT/RM

ACCESSION NR: AP4047345

S/0139/64/000/005/0028/0033

AUTHOR: Kopylov, Yu. A.; Trofimova, T. N.; Stolovitskiy, Yu. M.; Nemchenko, A. M. B

TITLE: Certain laws governing photoconduction in liquid organic semiconductors 15 21

SOURCE: IVUZ. Fizika, no. 5, 1964, 28-33

TOPIC TAGS: organic semiconductor, liquid organic semiconductor, photoconducting iodomethane, chlorobenzene, bromobenzene, ethyl ether

ABSTRACT: An intensive investigation of photoconductivity in liquid organic semiconductors has been started at the Dnepropetrovsk Civil Engineering Institute. The absorption spectra, electrical conductivity, and photoconductivity were measured for methylene iodide chlorobenzene, iodobenzene, 7 or bromobenzene, 7 and their binary systems with ethyl ether. It was found that in the binary systems photoconductivity changed from positive to negative at certain values of the haloorganic compound concentration. In one-component samples the photoconductivity-exciting radiation wavelength is close to the long-

Card 1/2

L 12467-65
ACCESSION NR: [illegible]

[illegible] absorption edge, while in binary systems having negative
photoconductivity it lies far above the wavelength limits of intrinsic
absorption. In the absorption band of the system the character of the
negative photoconductivity changes; for bromobenzene negative photo-
conductivity changes to positive. Orig. art. has: 6 figures and
1 table.

ASSOCIATION: Dnepropetrovskiy inzhenerno-stroitel'nyy institut
(Dnepropetrovsk Civil Engineering Institute)

SUBMITTED: 12Apr63 ENCL: 00 SUB CODE: SS, EM

NO REF SOV: 003 OTHER: 000 ATD PRESS: 3126

NEMCHENKO, A.T.

Agglutination reaction as one of the methods of laboratory diagnosis of diphtheria. Zhur.mikrobiol.epid.i immun. no.3:88 Mr '54. (MLRA 7:4)

1. Iz Molotovskogo instituta vaktsin i syvorotok.
(Diphtheria) (Agglutination)

ACCESSION NR: AP4041847

S/0139/64/000/003/0050/0055

AUTHORS: Kopy*lov, Yu. A.; Nemchenko, A. M.

TITLE: Regeneration of charge carriers in organic liquids

SOURCE: IVUZ. Fizika, no. 3, 1964, 50-55

TOPIC TAGS: organic dielectric, cyclic hydrocarbon, catalysis, electrode, electrolyte, controlled energy release

ABSTRACT: With an aim at a possible application of the regeneration of carriers in organic liquids to the injection of carriers for the purpose of controlling electric devices, the author reviews the connection between this phenomenon and the formation of metastable states of radicals in the electrodes, developed for the most part by A. N. Frumkin (Kinetika elektrodny*kh protsessov, Kinetics of electrode processes, izd. MGU, 1952) and by F. F. Vol'kenshteyn and V. L. Bonch Bruyevich (Problemy* kinetiki i kataliza, Problems of kinetics

Card 1/3

ACCESSION NR: AP4041847

and catalysis, VIII, AN SSSR, Moscow, 1955). Experiments were carried out with cyclohexanone, for which the maximum current is the largest. The experiments have established that the carriers go over into an electrically neutral metastable state following the discharge on the electrode. When the voltage is reversed, the radicals acquire a charge from the electrode, regenerate in the form of carriers, and go into the liquid. Both positive and negative carriers can become regenerated in principle, but only positive carriers are regenerated in cyclohexanone. A probe method described earlier (Yu. A. Kopy*lov, Izv. vuzov SSSR, Fizika, no. 6, 1959) was used to investigate the kinetics of the variation of the carrier density in different points in the gap between the electrodes. It is demonstrated that the Langevin method cannot be used to measure mobility in organic liquids. The conductivity of cyclohexanone is found to be governed predominantly by positive carriers. It is concluded that electric devices can be controlled by using carrier regeneration. Orig. art. has: 4 figures.

ACCESSION NR: AP4041847

ASSOCIATION: Dnepropetrovskiy inzhenerno-stroitel'skiy institut (Dnepropetrovsk Construction Engineering Institute)

SUBMITTED: 27Nov62

ENCL: 00

SUB CODE: EM, GC

NR REF SOV: 007

OTHER: 006

Card 3/3

L 10409-66 EWT(m)/EWP(j)/T RM

ACC NR: AM5013297

44,55 BOOK EXPLOITATION 44,55

UR

Demina, Natal'ya Vasil'yevna; Motorina, Aleksandra Vasil'yevna; Novikov, Nikolay Alekseyevich (Candidate of Technical Sciences); Novikova, Sof'ya Aleksandrovna; 44,64 Nemchenko, Eleonora Adol'fovna (Candidate of Technical Sciences); Pamfilova, Mariya Mikhaylovna; [illegible], Alisa Aleksandrovna (Candidate of Technical Sciences); Romanova, Lyubov' Stepanovna 44,55 44,55

15,44,55 64 B+1

Physicomechanical testing methods for chemical fibers, filaments, and films (Metody fizikomekhanicheskikh ispytaniy khimicheskikh volokon, nitey i plenok), Moscow, Izd-vo "Legkaya industriya," 1964, 352 p. illus., tables, fold chart, plates, biblio., appen. 2,300 copies printed.

TOPIC TAGS: test instrumentation, test method, cellulose fiber, synthetic fiber, cellulose plastic, textile engineering, mechanical engineering

PURPOSE AND COVERAGE: Instruments and procedures used in the physicochemical testing of chemical fibers are described. A description of the test methods for staple fibers, filament yarn, and cellophane is given. The book is intended for workers dealing with fiber and film testing in the chemical fiber and textile industries.

TABLE OF CONTENTS [abridged]:

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Card 1/2

UDC: [677-14+678-416]:620.1

L 10409-66

ACC NR: AM5013297

O

Ch. I. Conditions for test conducting -- 4
Ch. II. Installation and instruments designed for producing desired air temperature and humidity parameters and their control -- 10
Ch. III. Procedures and instruments for the determination of moisture in fibers and filaments -- 34
Ch. IV. Instruments used for sample weighing and their operation -- 49
Ch. V. Physicomechanical tests for filament yarn -- 56
Ch. VI. Physicomechanical tests for staple fibers -- 182
Ch. VII. Physicomechanical tests for cellulose film (cellophane) -- 251
Ch. VIII. Mathematical processing of test results -- 258
Ch. IX. Microscopic investigations of chemical fibers -- 268
Bibliography -- 302
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SUBMITTED: 24Nov64 SUB CODE: OC, MT NO REF SOV: 044

OTHER: 002

Card 2/2

NEMCHENKO, E.A.; FILINKOVSKAYA, Ye.F.

Evaluating the effect of finishing agents on the filament stiffness on the basis of the shear modulus of the filament. Khim. volok. no.2:62-65 '59. (MIRA 12:9)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

(Textile fibers, Synthetic--Testing)

NEMCHENKO, E.A.; NOVIKOV, N.A.

Evaluating the strength of textile materials in stretching.
Khim.volok. no.5:63-67 '59. (MIRA 13:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (VNIIV).
(Textile fibers, Synthetic--Testing)

15(4)
S/183/59/000/06/014/027
B004/B007

AUTHOR: Nemchenko, E. A.

TITLE: The Problem of the Elastic Properties of Rayon Fibers

PERIODICAL: Khimicheskiy volokna, 1959, Nr 6, pp 47 - 49 (USSR)

ABSTRACT: At the laboratoriya tekstil'nykh ispytaniy (Laboratory for Textile Testing) of the VNIIV (see Association) a method of determining the elastic properties of rayon fibers by compression of the fibers in a cylinder, determining the increase in volume, changing the specific volume and the air content after lifting the load, were worked out. Unlike what is the case with the method of determining elasticity by drawing, this method is suited for serial analyses. Results are shown for various synthetic and natural fibers in figures 1 - 4. By means of this method it is possible to judge the heat-insulating properties of the various rayon fibers and to select the suitable components for mixed tissues. There are 4 figures and 3 references, 1 of which is Soviet.

Card 1/2

The Problem of the Elastic Properties of Rayon Fibers

S/183/59/000/06/014/027
B004/B007

ASSOCIATION: VNIIV-Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (All-Union Scientific Research Institute for Synthetic Fibers)

Card 2/2

S/183/60/000/004/005/005
B004/B058

AUTHOR: Nemchenko, E. A.

TITLE: Resistance of Cord to Fatigue Bending at High Temperature

PERIODICAL: Khimicheskiye volokna, 1960, No. 4, pp. 49 - 51

TEXT: The author reports on fatigue bending tests conducted by means of a Hungarian "Metrimpex" apparatus of the type 5-24-1 (Fig. 1). Fig. 2 shows the scheme of the apparatus. The clamped thread, loaded with a weight, is bent by a combination of rollers which are moved back and forth in the apparatus by a connecting-rod drive. The experimental data obtained at 80° and 130°C are listed in Table 1 for caprone cord of the type 14к (14k) from the Klinskiy kombinat (Klin Kombinat) and Kiyevskiy kombinat (Kiyev Kombinat), viscose cord of the type 10В (10V) from the Kalininskiy kombinat (Kalinin Kombinat) and Kamenskiy kombinat (Kamenka Kombinat), and imported cord. Caprone cord proved to be more resistant than viscose cord. The values of Soviet products were equal to those of imported products. Since the ГОСТ (GOST) will shortly introduce standards for strength and length increase at 80°C, the values obtained

Card 1/2

Resistance of Cord to Fatigue Bending at High Temperature

S/183/60/000/004/005/005
B004/B058

for caprone cord by means of the Metrimpex apparatus were compared with those obtained from a dynamometer at 80°C (Table 2). The dynamometer values for strength are lower than the Metrimpex values. At 130°C, the static and dynamic tests for viscose cord showed great differences (Table 3). While the static values for Soviet viscose cord were comparable to those of imported types, the dynamic values of the Soviet products were much lower. There are 2 figures and 3 tables.

ASSOCIATION: VNIIV (All-Union Scientific Research Institute of Synthetic Fibers)

Card 2/2

NEMCHENKO, E.A.; DENISENKO, N.V.

Factors affecting the resistance of cord to repeated twists. Khim. volok. no.6:50-53 '61. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

(Synthetic fabrics--Testing)

STROYENOV, V. B.; DENISENKO, N. V.; NEMCHENKO, E. A.

Determination of the fatigue properties of cord subjected to flexing in a modernized apparatus of the type 5-24-1. Khim. volok. no.6:31-34 '62. (MIRA 16:1)

1. Mytishchinskiy zavod (for Stroyenov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Denisenko, Nemchenko).

(Synthetic fabrics--Testing)

NEMCHENKO, E.A.; DENISENKO, N.V.

Strength of cord subjected to repeated bending tests. Khim. volok. no.5:55-59 '63.

(MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

MIKHAYLOV, N.V.; FAYNBERG, E.Z.; NEMCHENKO, E.A.; DENISENKO, N.V.

Study of the fine molecular structure of cellulose hydrate fibers by the determination of shear modulus. Vysokom. soed. 6 no.3:527-533 Mr'64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy institut iskusstvennogo volokna.

DEMINA, Natal'ya Vasil'yevna; MOTORINA, Aleksandra Vasil'yevna; NOVIKOV, Nikolay Alekseyevich, kand.tekhn.nauk; NOVIKOVA, Sof'ya Aleksandrovna; NEMCHENKO, Eleonora Adol'fovna, kand. tekhn. nauk; PANFILOVA, Mariya Mikhaylovna; ROGOVINA, Alisa Aleksandrovna, kand. tekhn. nauk; ROMANOVA, Lyubov' Stepanovna; TALYZIN, M.D., kand. tekhn. nauk, retsenzent; VERBITSKAYA, Ye.M., red.

[Methods of physicomechanical testing of synthetic fibers, threads and films] Metody fiziko-mekhanicheskikh ispytanii khimicheskikh volokon, nitei i plenok. Moskva, Legkaia industriia, 1964. 352 p. (MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennykh volokon (for all except Talyzin, Verbitskaya).

NEMCHENKO, E.A.; FAYNBERG, E.Z.; SEREBRYAKOVA, Z.G.; ZABRAN, F.S.;
YELCHINA, N.V.

Comparative evaluation of avivage preparations by the data of the measurement of the modulus of shearing. Khim. volok. no.4:62-64 '65.

(MIRA 18:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

NEMCHENKO, F.

Increasing the production of existing grain mills. Muk.-elev.
prom. 25 no.2:14-15 F '59. (MIRA 12:4)

1. Glavnyy inzhener Nevinnomysskogo mel'nichnogo kombinata.
(Grain milling)

AUTHOR: Nemchenko, G.

SOV-4-58-8-5/35

TITLE: A Wonderful Saw (Chudesnaya pila)

PERIODICAL: Znaniye-sila, 1958, Nr 8, p 2 (USSR)

ABSTRACT: The article presents a general description of the motor saw "Druzhba", which has been used for 3 years in the lumber industry. Already 50,000 motor saws of the type "Druzhba" have been produced, and the output this year is going to reach 55,000 units. Technical details are not given. There is 1 drawing.

1. Power saws--Production 2. Lumber industry--Equipment

Card 1/1

AL'TOV, G.; IZMAYLOV, Ya.A., kand.tekhn.nauk; NEMCHENKO, G.; ZVEREV, S.

Brief news report. Znan.sila 33 no.12:12-13 D '58. (MIRA 11:12)
(Technology)

TEREKHOV, I.V.; MIROSHNICHENKO, A.G.; NEMCHENKO, G.V.; DINEVICH, V.G.

Frogs of tractor-driven plows from high-strength cast iron. Trakt. i sel'khozmash. no.4:45-46 Ap '65. (MIRA 18:5)

1. TSentral'noye konstruktorsko-tekhnologicheskoye byuro Gosudarstvennogo komiteta po mashinostroyeniyu pri Gosplane SSSR, Odessa.

LIPTUGA, I.V., inzh.; MIROSHNICHENKO, A.G., inzh.; NEMCHENKO, G.V., inzh.;
KIPER, I.K., inzh.

Obtaining high-strength cast iron by smelting in cupola furnaces with a mixture of thermoanthracite and coke. Mashinostroenie no.3:26-27 My-Je '65. (MIRA 18:6)

MIROSHNICHENKO, A.G., inzh.; NEMCHENKO, G.V., inzh.; KLIMENT'YEV, I.D., inzh.

Charge level indicator for cupola-furnace stack. Mashinostroenie no.4:72 Jl-Ag '65. (MIRA 18:8)

NEMCHENKO, I.G.

AID P - 1627

Subject : USSR/Chemistry

Card 1/1 Pub. 29 - 9/23

Author : Nemchenko, I. G.

Title : Painting of hot insulated surfaces

Periodical : Energetik, 1, 17, Ja 1955

Abstract : A method of painting of an insulated hot surface is briefly described. It was tried in 1951 at the Ivanovo State Regional Electric Power Plant and found satisfactory. The surface remains in good condition even at present.

Institution: IVGRES (Ivanovo State Regional Electric Power Plant)

Submitted : No date

LITVINETS, Grigoriy Mikhaylovich [Lytvynets', H.M.]; KUZ'MINA,
M.F., red.; NEMCHENKO, I.Yu. [Nemchenko, I.IU.],
tekhn. red.

[Commercial raising of turkeys for meat] Promyslove vyroshchuvannia indykiv na m'iaso. Kyiv, Derzhsil'hospvydav URSR, 1963. 37 p. (MIRA 17:3)

NEMCHENOK, M. A., Cand Med Sci -- (diss) "Variants of Jackson seizures in tumors and in other focal processes in the area of central convolutions and the upper parietal lobe." Khar'kov, 1960. 11 pp; (Khar'kov State Medical Inst); 200 copies; price not given; (KL, 18-60, 157)

NEMCHENKO, M.I., kand. veter. nauk

Bronchopneumonia in calves and its treatment. Veterinariia 42 no.5:84-85 My '65.
(MIRA 18:6)

1. Smolenskaya nauchno-issledovatel'skaya veterinarnaya stantsiya.

1. NEMCHENKO, N. I.

2. USSR (600)

4. Diesel Motor

7. Determining the angle of fuel atomization by infectors. MTS, 12, no. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

NEMCHENKO, N. I.

NEMCHENKO, N. I. -- "The Study of the Performance of a Light Internal-Combustion Motor by Making an Oscillographic Record of Its Exhaust." Chelyabinsk Institute of Mechanization and Electrification of Agriculture, Chelyabinsk, 1956. (Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No 43, October 1956, Moscow

L 23452-65

ACCESSION NR: AR5000802

S/0273/64/000/010/0023/0023

SOURCE: Ref. zh. Dvigateli vnutrennego sgoraniya. Otd. vyp., Abs. 10.39.181

AUTHOR: Nemchenko, N.I.

TITLE: Oscillographic recording of exhaust noise in diesel engines as an aid in detecting certain malfunctions

CITED SOURCE: Tr. Chelyab. in-ta mekhaniz. i elektrifik. s. kh., vyp. 10, 1963, 78-86

TOPIC TAGS: diesel engine, exhaust noise oscillogram, engine malfunction analysis, drive shaft load

TRANSLATION: The article describes a series of tests carried out to detect certain malfunctions of a multi-cylinder diesel, such as misfire of a cylinder when fuel feed is blocked or the exhaust valve leaks in any given cylinder, from oscillograms of the engine's exhaust noise. The extent of load on the drive shaft of an engine can also be determined by means of a specialized noise meter from the sound pressure level of exhaust gas flow. Bibl. with 2 titles; 7 illustrations.

Card 1/2

L 23452-65

ACCESSION NR: AM5006001

SUB CODE: PR ENCL: 00

Card 2/2

Nemchenko N.M.

AUTHOR: Lupkin D. M., Docent, Cand. Tech. Sci., Nemchenko, N.M., Cand. Tech. Sci.

TITLE: The Function of Insulation between Commutator Bars in the Process of Commutation (O roli izolyatsii mezhdu plastinami kollektora v protsesse kommutatsii)

PERIODICAL: Vestnik Elektropromyshlennosti, 1957, No.2, pp.25-27 (U.S.S.R.)

ABSTRACT: In calculating the commutation of d.c. machines there is a tendency to ensure complete compensation of the reactive e.m.f. by the magnetic field of the interpole and it is considered that when this is done the current in the short circuited section varies linearly. However, an analysis presented in this article shows that this is not so.

An equation is derived from which relationships between the currents in commutator segments and the contact resistance are found. Then curves are derived for the current in a commutator bar with ideal commutation and

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TITLE: The Function of Insulation between Commutator Bars in the Process of Commutation (O roli izolyatsii mezhdu plastinami kollektora v protsesse kommutatsii)

then in several adjacent bars. A current curve is then plotted for commutation in the case when the brush covers a whole number of bars, and similarly when it covers a whole number of bars plus a part of a bar. The first of these current curves follows a stepped line and the second a broken line. In classical theory it is usual to discount the thickness of the insulation between bars so that a theoretically straight commutation line is obtained when the commutating and constant reactive e.m.f.'s are equal. The total e.m.f. in the short circuited section is zero, the rate of change of current is constant and the current is distributed uniformly under the brush. However, when allowance for the thickness of the insulation are made, as in this case, then, when the commutating and reactive e.m.f.'s are equal, the rate of change of the current varies, though to a lesser extent with constant commutating e.m.f.; but the total e.m.f. in the short circuited

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TITLE: The Function of Insulation between Commutator Bars in the Process of Commutation (O roli izolyatsii mezhdu plastinami kollektora v protsesse kommutatsii)

section is however not zero and the current is not distributed uniformly under the brush. Under certain conditions this leads to sparking and the presence of an uncompensated e.m.f. in the short circuited section increases radio interference. These undesirable effects are more severe if the width of the brush is not equal to a whole number of commutator bars. This point should be taken into account in designing machinery.

Card 3/4

The article contains 5 diagrams. There are no references.

32(3)

SOV/112-59-5-9126

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5, p 103 (USSR)

AUTHOR: Lupkin, D. M., and Nemchenko, N. M.

TITLE: Metadyne and Its Application to Electric Traction

PERIODICAL: Sb. Leningr. in-ta inzh. zh.-d. transp., 1957, Nr 155, pp 103-115

ABSTRACT: The metadyne, invented by Academician K. I Shenfer in 1929, gained a certain usage in the electric traction in those cases where frequent motor starting is required, e.g., in metropolitan transportation and on switching locomotives. At present, the metadyne is used on French railroads, the London subway, and the Berlin streetcar system. Algebraic equations describing metadyne operation and connecting its principal parameters are presented. The equations are developed with no allowance for magnetic saturation. In the principal scheme, the metadyne is considered as a DC converter that comprises a two-pole armature, a round windingless stator, and four commutator brushes shifted by 90°. The armature is driven by a

Card 1/2

SOV/112-59-5-9126

Metadyne and Its Application to Electric Traction

separate motor at a constant speed. The role of the "controlling" winding that secures the automatic characteristic of motor operation is noted. Formulae are developed for determining the parameters of the "regulating" metadyne winding; commutation problems are examined; the role of a "stabilizing" winding under transient conditions (current-collector break) is clarified; rules for putting the metadyne into service are given. The figure-8 circuit of traction motors is explained; the problem of the best characteristic of a metadyne-fed motor is considered; a mathematical analysis of the automatic characteristic of a motor fed by a metadyne is given. Regenerative braking by means of a metadyne is examined. Bibliography: 2 items.

V.N.K.

Card 2/2

NEMCHENKO, N.M., kand. tekhn. nauk

Electric drives for securing a constant speed of cutting on a rotary veneer cutter. Der. prom. 14 no.5:10-12 My '65. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut derevoobrabatyvayushchey promyshlennosti.

NEMCHENKO, N.M., kand. tekhn. nauk

Automatic control of the strength and thickness of wood particle boards during manufacture. Der. prom. 14 no.9: 26-27 S '65.

(MIRA 18:12)

YERMAKOV, V.I.; NEMCHENKO, N.N.

Possibility of excluding oil- and gas-bearing zones on the basis of data of hydrocarbon analysis. Dokl. AN SSSR 155 no.1:85-87 Mr '64. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza. Predstavleno akademikom A.A.Trofimukom.

SVETOZAROVA, O.I.; ZHDANOVA, V.V.; NESMEYANOVA, T.S.; LEVASHOVA, E.P.;
KOZOREZOVA, A.I.; NEMCHENKO, S.A.; MINETS, T.M.

Studying the compsition of gasolines derived from the catalytic cracking of high-paraffin kerosene gas oil. Trudy GrozNII no. 15:344-350 '63. (MIRA 17:5)

SVETOZAROVA, O.I.; SHDANOVA, V.V.; NESMEYANOVA, T.S.; LEVASHOVA, E.F.;
KOZOREZOVA, A.I.; NEMCHENKO, S.A.; MINETS, T.M.

Studying the composition of the aromatic hydrocarbons of gasolines. Nefteper. i neftekhim. no.6:19-21 '63 (MIRA 17:7)

1. Groznenskiy neftyanoy nauchno-issledovatel'skiy institut.

YEFIMENKO, G.G., kand.tekhn.nauk; GIMMEL'FARB, A.A., kand.tekhn.nauk;
Prinimali uchastiye: POLTAVETS, V.V., inzh.; GRISHKO, V.A., inzh.;
NEMCHENKO, S.Z., inzh.; OSTAPENKO, V.A., tekhnik; POBUDINSKIY, L.I.,
tekhnik; KATSMAN, V.Kh., tekhnik; KARMAZIN, A.G., tekhnik

Regulating blast furnace operations by fluctuations of fas pressure and the distribution of materials in the hearth bottom. Stal' 22 no.10:876-880 O'62. (MIRA 15:10)

(Blast furnaces)

1. NEMCHENKO, T.P.

2. USSR (600)

4. Karakul Sheep

7. Correctly utilize winter pastures, expend feed economically. Kar.i zver No. 6 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

NEMCHENKO, V.; YAKOVENKO, M.

Ways to increase labor productivity in the coal mining industry of the U.S.S.R. Biul. nauk. inform.: trud i zar. plata 3 no. 10:14-18 '60. (MIRA 13:12)

(Coal mines and mining--Labor productivity)

NESHPOR, V.S.; NEMCHENKO, V.F. [Niemchenko, V.P.]; L'VOV, S.N.[Samsonov,
H.V.]

Some electrophysical properties of titanium compounds with non-
metallic elements of the fourth group of the periodic table.
Ukr. fiz. zhur. 5 no.5:839-842 N-D '60. (MIRA 14:3)

1. Institut metallokeramiki i spetsial'nykh splavov AN USSR i
Khersonskiy pedagogicheskiy institut im. N.K. Krupskoy.
(Titanium compounds—Electric properties)

86037
S/020/60/135/003/019/039
B019/B077

24.7700 (1043,1143,1559)

AUTHORS: L'vov, S N, Nemchenko, V F, and Samsonov, G V

TITLE: Some Principles of Electrical Properties of Borides, Carbides, and Nitrides of Transition Metals of the IV-VI Groups of the Periodic Table

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 135, No 3 pp 577-580

TEXT: The authors conducted measurements of the Hall coefficient, the thermo-emf, and the resistivity of monocarbides, nitrides, and some diborides of the transition metals of the IV-VI groups of the periodic table. The results are shown in Table 1. Using these experimental results the authors calculated the magnitude of $\delta = n_- u_-^2 - n_+ u_+^2$ which is characteristic of the conductivity type. δ is positive in nearly all metal compositions investigated; and this is a proof of the n-type conductivity of these compounds. From the increase of δ during the transition of metals of the IV group to the following group the influence of the electron structure of the metal on the electric properties of the compound is

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Some Principles of Electrical Properties of Borides, Carbides, and Nitrides of Transition Metals of the IV-VI Groups of the Periodic Table

S/020/60/135/003/0
B019/B077

studied thoroughly. This influence is found to be very strong. The authors are convinced of the periodic change of the properties of the substances in the metal-boride-carbide-nitride series that the influence of the electronic structure of the metalloid atoms strongly affects the properties of the phases. Legend to Table 1: 1) metal, phase, 2) Hall constant, 3) $\delta \cdot 10^{-23}$ in cm/v^2sec^2, 4) resistivity ρ in μohm cm, 5) thermo-emf in μv/deg n_- and n_+ are the concentrations and u_-, u_+ the mobilities of the electrons. There are 1 table and 18 references: 10 Soviet, 3 German and 5 US

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov Akademii nauk SSSR (Institute of Powder Metallurgy and Special Alloys, Academy of Sciences, USSR). Khersonskiy pedagogicheskiy institut im N K Krupskoy (Kherson Pedagogical Institute

Card 2/4

L'VOV, S.N.; NEMCHENKO, V.F.; SAMSONOV, G.V.

Heat conductivity of high-melting borides, carbides, and nitrides. Porosh.met. 1 no.6:70-74 N-D '61. (MIRA 15:5)

1. Khersonskiy gosudarstvennyy pedagogicheskiy institut imeni N.K.Krupskoy i Institut metallokeramiki i spetsial'nyk splavov AN UkrSSR.

(Borides--Thermal properties)
(Carbides--Thermal properties)
(Nitrides--Thermal properties)

22415

24.7700 1043, 1138, 1160

S/120/61/000/002/028/042
E073/E135

AUTHORS: L'vov, S.N., Nemchenko, V.F., and Marchenko, V.I.

TITLE: On a method of measuring the Hall coefficient and the specific electric resistance of solid high melting point compounds

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.2, pp.159-160

TEXT: The electrical properties of compounds of the transition metals of the fourth to the sixth group of the periodic table with boron, carbon, nitrogen, etc. have been relatively little studied. For such measurements it is difficult to obtain suitable samples and it is also difficult to ensure the supply of a current intensity strong enough for the experiments. In this paper some measures are described which enable these difficulties to be overcome. Specimens of about 14 x 2.5 x 0.6 mm are cut by electro-erosion from the core of compact sintered blanks with the highest uniformity as regards porosity and chemical composition. The specimen must not be polished to a high brightness, since this would cause difficulties in obtaining a strong copper coating, which is necessary for soldering on leads.

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S/120/61/000/002/028/042
E073/E135

On a method of measuring the Hall coefficient and the specific electric resistance of solid high melting point compounds

Such leads cannot be soldered on directly but they can be soldered on by using a thin intermediate coating of metal, for instance copper, at the ends. Such a coating can be deposited electrolytically in a bath of the following composition: water 100 g, $CuSo_4$ 20 g, H_2SO_4 5 g, ethyl alcohol 0.2 g. The obtained copper layer will adhere quite strongly and will be suitable for applying low melting point solders, for instance Wood alloy. The reliability of such contacts was verified on a number of carbides, nitrides, borides and silicides of high melting point metals. Current of a density of up to 300 to 350 A/cm^2 can be passed through the specimen with a stability of the order of the third to fourth decimal place: this is 10 to 15 times as high as the densities obtained by J.M. Bardeen and B.S. Chandrasekhar (J. Appl. Phys., 1958, 28, 1372). As a result, even in materials with low Hall coefficients ($\sim 0.5 \times 10^{-4}$ cm^3/Coulomb), the scatter in the measured voltages will not exceed 1 to 2% in the case of a potentiometric set-up with a sensitivity of 10^{-7} V/scale division.

Card 2/5

21425

S/120/61/000/002/028/042
On a method of measuring the Hall...E073/E135

In specimens of 1.5 mm2 cross-section applied by the authors, this current density is obtained for a current intensity of 4 to 5 A, which simplifies the current supply to the test set-up. The Hall measurements on solid high melting point compounds can be carried out by the usual method with electromagnets ensuring a field of 12 to 15 kOersted. For convenient measurement, the specimen is placed into a gap of the electromagnet in a special holder, designed to also permit measuring the specific electric resistance of the specimen. It consists of a 2 mm thick pertinax plate 1 (see figure) with an opening 2 of 6 x 6 mm2 in the centre, on the sides of which are two grooves 3. In these the current leads 5 are held by pressure from two thin brass plates 4. Due to the mobility of the current leads, it is easy to adjust the centre of the specimen to be opposite the metering probes. Into six slots, which are perpendicular to the axis of the holder, thin copper tubes are glued in, in which molybdenum probes 6 (0.8 mm dia.) can move easily but tightly. The middle ones serve for measuring the Hall voltage, the end ones serve for measuring the voltage drop when measuring the specific resistance. The probes are pressed on by means of two screws 7 which carry perspex discs at the ends.

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21435

S/120/61/000/002/028/042

On a method of measuring the Hall ... E073/E135

Rubber washers 9 are glued on to the faces of the discs so as to produce a tight and uniform pressure on the probes. The holder is connected in the circuit by means of seven pins 11 which are glued into appropriate recesses and are pressed down with the plate 10; these pins are fitted into a block with sockets ("recesses") and fixed to one of the poles of the electromagnet. The second current lead is connected to a separate terminal 12. The holder is convenient and reliable in operation and, particularly, it permits measurement inside a very narrow interpole space (3 mm). As a result, a relatively high magnetic potential and a uniform magnetic field can be obtained with relatively small magnets.

There are 1 figure and 3 references: 2 Soviet and 1 non-Soviet.

[Abstractor's Note: This is a slightly abridged translation.]

ASSOCIATION: Khersonskiy pedagogicheskiy institut
(Kherson Pedagogic Institute)

SUBMITTED: February 16, 1960

Card 4/5

S/137/62/000/007/018/072
A052/A101

AUTHORS: L'vov, S. N., Nemchenko, V. F., Samsonov, G. V.

TITLE: The heat conductivity of refractory borides, carbides and nitrides

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 45, abstract 7G316 ("Poroshk. metallurgiya", no. 6, 1961, 70 - 74; English summary)

TEXT: An installation for determining the heat conductivity by a stationary method is described. The heat conductivity values of borides, carbides and nitrides of a number of transition metals are specified. The porosity of the samples was eliminated according to the additivity rule. The Wiedemann-Franz ratio for refractory compounds has about the same order as for metals, with the exception of Nb monomitride, Mo seminitride and Cr nitride. The heat conductivity characteristics of refractory compounds are discussed in connection with their structure. There are 15 references.

R. Andriyevskiy

[Abstracter's note: Complete translation]

Card 1/1

L'VOV, S.N.; NEMCHENKO, V.F.; MARCHENKO, V.I.

Methods for measuring the Hall coefficient and electric resistivity of solid high-melting compounds. Prib. i tekh. eksp. 6 no.2: 159-160 Mr-Ap '61. (MIRA 14:9)

1. Khersonskiy pedagogicheskiy institut.
(Solids--Electric properties)

S/126/61/011/001/014/019
E032/E314

AUTHORS: L'vov, S.N., Nemchenko, V.F., Kosolapova, T.Ya and Samsonov, G.V.

TITLE: On the Electrical Properties of Chromium Carbides

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol. 11, No. 1, pp. 143 - 145

TEXT: The present authors have measured the resistivity ρ, the Hall coefficient R at room temperature, the thermo-electric power ε_T and the temperature coefficient of resistance α_ρ for $Cr_{23}C_6$, Cr_7C_3 and Cr_3C_2. The results obtained are given in the following table.

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S/126/61/011/001/014/019
E032/E314

On the Electrical Properties of Chromium Carbides

Phase	Carbon concentration, %	ρ $\mu\Omega \cdot$cm	$R \cdot 10^4$ cm^3/coul	ϵ_T $\frac{\mu V}{deg}$	$\alpha_\rho \cdot 10^3$, deg^{-1}	$b = n_- u_-^2 - n_+ u_+^2$ cm/V^{2}sec^2
Cr	0	18.9	+3.63	-	+2.5	-63.6
$Cr_{23}C_6$	5.33	127±2	+1.2+0.2	+2.76±0.02	+1.72±0.11	-4.6
Cr_7C_3	9.00	109±4	-0.38±0.03	-7.1±0.3	+1.06+0.05	+0.20
Cr_3C_2	13.33	75±5	-0.47±0.03	-6.7±0.5	+2.33±0.04	+0.52

The Cr_3C_2 and Cr_7C_3 powders were prepared by the method described by Kosolapova and Samsonov in Ref. 1 and 2.

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S/126/61/011/001/014/019
E032/E314

On the Electrical Properties of Chromium Carbides

The Hall coefficient was measured using direct current in a magnetic field of 12 500 Oe and the resistivity was measured potentiometrically. The thermo-electric coefficient was determined relative to commercial copper and then converted to lead (20-100 °C) and the temperature coefficient of resistance was determined in the temperature range 0-100 °C. The effect of the porosity of the specimens on R and ρ was determined by graphical extrapolation from experimental data for Cr_7C_3 and Cr_3C_2, while for $Cr_{23}C_6$ the formulae given by Juoretscke and Steinitz (Ref. 3) were used. The quantities ϵ_T and α_ρ were found to be independent of the porosity. There are 1 table and 7 references: 5 Soviet and 2 non-Soviet.

Card 3/4

S/126/61/011/001/014/019
E032/E314

On the Electrical Properties of Chromium Carbides

ASSOCIATIONS: Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR (Institute of Metal Ceramics and Special Alloys of the AS Ukrainian SSR)
Khersonskiy pedagogicheskiy institut im. N.K. Krupskoy (Kherson Pedagogical Institute im. N.K. Krupskaya)

SUBMITTED: June 27, 1960

Card 4/4

15 2640
24 7700

S/126/61/012/004/021/021
E073/E535

AUTHORS: Verkhoglyadova, T.S., L'vov, S.N., Nemchenko, V.F. and Samsonov, G.V.

TITLE: Electric and galvanomagnetic properties of chromium nitrides

PERIODICAL: Fizika metallov i metallovedeniye, v.12, no.4, 1961, 622-624

TEXT: In the system chromium-nitrogen two stable nitride phases are known - Cr_2N and CrN. According to one of the authors (Ref.1: Samsonov G.V. Zhurnal strukturnoy khimii, 1960, 1, 447) these are characterized by a combination of metallic and ionic bonds, whereby the latter predominate to some extent. This is due to the high ionization potential of the nitrogen atom and the low acceptor ability of the incomplete d-shell of the chromium atom. This assumption on the nature of the chemical bond in nitride phases of chromium is confirmed by the results of X-ray structural investigations, according to which the chemical bond in the higher nitride Cr_2N approaches the type of bond of the chromium oxide Cr_2O_3. In this paper the electric and galvano-

Card 1/4

X

magnetic properties of chromium nitrides are studied. The compact specimens were produced by sintering briquettes with a porosity of 20-25% pressed from powder of electrolytic chromium. The sintering was at 950°C (for alloys with a composition approaching CrN) to 1300°C (for alloys approaching the composition of Cr_2N) for durations of 3 to 4 hours in nitrogen which was carefully purified from oxygen. The porosity of the specimens varied between 0 and 5%. This method of preparing specimens enabled avoiding changes in their phase state and the formation of carbonitride phases which are unavoidable in hot pressing of preliminarily manufactured chromium nitride powders. From thus produced specimens the specific electric resistance ρ and the absolute coefficient of thermo e.m.f. α_T, the Hall coefficient R and the thermal conductivity $\varkappa$ were determined. The results are entered in a table, which also contains data from the literature for pure chromium as published by A. Ye Vol (Ref.4: Stroyeniye i svoystva dvoynykh metallicheskikh sistem*, v.1, Fizmatgiz, M., 1959) and S. Foner (Ref.5: Phys.Rev., 1957, 107, 1513). It was found that in contrast to most of the intermediate phases (including chromium

Card 2/4

* (Structure and properties of binary metallic systems)

carbides), the resistance of chromium nitrides increases from the lower nitrides to the higher ones. Similarly, the Hall coefficient and the thermo e.m.f. coefficient increase with increasing nitrogen content. On the other hand, the thermal conductivity of the higher chromium nitrides is lower than of the lower chromium nitrides. This behaviour can be qualitatively explained on the basis of the electron structure of chromium proposed by Ye. S. Borovik and V. T. Volotskaya (Ref.7: ZhETF, 1959, 36, 1650) who assumed that the electric conductivity of Cr is basically due to highly mobile holes and electrons in the overlapping 4s- and 4p-bands. With some degree of approximation this enables utilizing the known expressions of the Hall coefficient and the electric conductivity for the case of two types of carriers and to determine the numerator $(n_-u_-^2 - n_+u_+^2) = b$ of the Hall coefficient. The appropriate values are given in the table. The chromium nitride CrN can be classified as an electron semi- conductor, the use of which is promising as a negative branch of high temperature thermocouples (particularly for operation inside nitrogen) and also for producing thermoelectric transducers of heat

Card 3/~~5~~4

Electric and galvanomagnetic ... S/126/61/012/004/021/021
E073/E535

into electricity with an efficiency of up to 18-20% if paired for instance with MnSi. There are 1 table and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc. The English-language reference is quoted in the text.

ASSOCIATIONS: Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR
(Institute for Cermets and Special Alloys AS UkrSSR)
and
Khersonskiy pedagogicheskiy imeni N.K.Krupskoy
(Kherson Pedagogic Institute imeni N.K.Krupskaya)

SUBMITTED: March 7, 1961

Card 4/5

L'VOV, S.N.; NEMCHENKO, V.F.; SAMSONOV, G.V.

Effect of nonmetal atoms on the electric properties of high-melting transition metal compounds. Porosh.met. 2 no.4:3-10 Jl-Ag '62. (MIRA 15:8)

1. Khersonskiy gosudarstvennyy pedagogicheskiy institut imeni Krupskoy i Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.

(Intermetallic compounds--Electric properties)
(Ceramic metals)

L'VOV, S.N.; NEMCHENKO, V.F.; KISLYY, P.S.; VERKHOGLYADOVA, T.S.;
KOSOLAPOVA, T.Ya.

Electric properties of chromium borides, carbides, and nitrides.
Porosh.met. 2 no.4:20-25 Jl-Ag '62. (MIRA 15:8)

1. Khersonskiy gosudarstvennyy pedagogicheskiy institut imeni Krupskoy i Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.

(Chromium compounds--Electric properties)
(Ceramic metals--Electric properties)

KISLYY, P.S.; L'VOV, S.N.; NEMCHENKO, V.F.; SAMSONOV, G.V.

Physical properties of the boride phases of chromium. Porosh. met. 2 no.6:50-53 N-D '62. (MIRA 15:12)

1. Khersonskiy gosudarstvennyy pedagogicheskiy institut imeni N.K.Krupskoy i Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.

(Chromium boride—Testing)

L'VOV, S.N. [L'vov, S.M.]; NEMCHENKO, V.F. [Niemchenko, V.P.];
SAMSONOV, G.V. [Samsonov, H.V.]

Electric properties of titanium carbide-titanium nitride alloys. Ukr.fiz.zhur. 7 no.3:331-335 Mr '62. (MIRA 15:7)

1. Institut metallokeramiki i spetsial'nykh splavov AN USSR, g. Kiyev, i Khersonskiy pedagogicheskiy institut.
(Titanium carbide--Electric properties)
(Titanium nitride--Electric properties)

34431
S/020/62/142/004/018
B101/B110

15.2240

AUTHORS: Samsonov, G. V., Verkhoglyadova, T. S., L'vov, S. N., and Nemchenko, V. F.

TITLE: Effect of oxygen on the electric properties of titanium nitride

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 4, 1962, 862 - 865

TEXT: The electric properties of TiN, in the lattice of which N was stepwise substituted by O, were investigated. The TiN - TiO melts were obtained by treating a mixture TiO_2 + Ti for 4 hr with NH_3 at 800°C (reduction of TiO_2) and 4 hr at 1300°C (formation of TiN and solid solutions of TiN + TiO). Metallographic investigation and X-ray diffraction proved that the melts were monophase. The electric properties changing with the TiO content were:

Card 1/3

Effect of oxygen on the...

S/020/62/142/004/018/022
B101/B110

Mole%		I	II	III	Mole%		I	II	III
TiN	TiO				TiN	TiO			
100	0	26	-0.67	-9.3	62.7	37.3	12.7	-1.36	-8.6
90	10	17.9	-0.4	-7.1	47.6	52.4	14.2	-1.64	
79.6	20.4	13.1	-0.17	-6.4	46.7	53.3	-	1.70	-13.4
73.1	26.9	11.3	-0.48	-0.75	46.0	54.0	14.3	-2.02	-
65.0	35.0	12.1	-0.82	-	41.8	58.2	27.0	-2.64	-

I = electric resistivity, μohm·cm; II = Hall coefficient $R \cdot 10^4$ m^3/coulomb; III = coefficient of thermo-emf, μv/deg. The course of the electric resistance points to a superimposition of two factors: at low O content the effect of its lower ionization potential, as compared with N for dominates; at high O content, the effect of the larger atomic radius compared with N, predominates, thus reducing the overlapping of energy bands, and increasing the lattice spacing. All melts investigated showed reversal of the sign of the temperature coefficient of the electric resistance (Fig 4) when a certain temperature was reached. The earlier passage through the maximum for melts rich in TiO is caused by the geometric factor: the larger radius of the oxygen ion. The [illegible]

Card 2/4

Effect of oxygen on the...

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maxima correspond to the preponderant effect of one of the two nonmetals, the flat maxima correspond to the combined action of both nonmetals. Similar electric properties are assumed for the systems ZrN - ZrO, and HfN - HfO. There are 4 figures, 2 tables, and 6 references: 4 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: A. Münster, K. Sagel, G. Schlamp, Nature, 174, 1154 (1954).

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov Akademii nauk USSR (Institute of Powder Metallurgy and Special Alloys of the Academy of Sciences UkrSSR). Khersonskiy pedagogicheskiy institut im. N. K. Krupskoy (Kherson Pedagogical Institute imeni N. K. Krupskaya)

PRESENTED: September 14, 1961, by G. V. Kurdyumov, Academician

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L'VOV, S.N.; NEMCHENKO, V.F.; SAMSONOV, G.V.

Physical properties of chromium borides, carbides, nitrides, and silicides. Izv. vys. ucheb. zav.; fiz. no.5:21-26 '63. (MIRA 16:12)

1. Khersonskiy pedagogicheskiy institut imeni N.K.Krupskoy i Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.

NEMCHENKO, V. F.

TITLE: Seminar on refractory metals, compounds, and alloys (Kiev, April 1963).

SOURCE: Atomnaya energiya, v. 15, no. 3, 1963, 266-267

ACCESSION NR: AP3008085

Ya. A. Kraftmakher. Heat capacity of W, Ta, and Nb.

V. M. Amonenko and others. Expansion coefficients of Zr, Nb, Mo, Ta, and W.

N. V. Ageyev, M. S. Model'. Expansion coefficients of chromium-base alloys.

S. N. L'vov, V. F. Nemchenko. Temperature dependence of emf and resistivity of Cr, Ti, V, and their borides, carbides, and nitrides; Ettingshausen-Nernst effect in titanium, TiB_2, TiC, and TiN.

N. V. Kolomoyets. The emf of chromium-group metals and their alloys.

G. V. Samsonov and others. Superconductivity and thermal-electron properties of refractory compounds.

D. A. Prokoshkin and others. Magnetic, optical, and other properties of refractory elements and the oxidation resistance of beryllides of refractory elements.

Card 10/11

L'VOV, S.N.; NEMCHENKO, V.F.; PADERNO, Yu.B.

Heat conductivity of hexaborides of alkaline and rare earth metals. Dokl. AN SSSR 149 no.6:1371-1372 Ap '63. (MIRA 16:7)

1. Khersonskiy pedagogicheskiy institut im. N.K.Krupskoy i Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR. Predstavleno akademikom A.N.Frumkinym.

(Rare earth borides--Thermal properties)

L'VOV, S.N. [L'vov, S.M.]; NEMCHENKO, V.F. [Niemchenko, V.P.];
SAMSONOV, G.V. [Samsonov, H.V.]; VERKHOGLYADOVA, T.S.
[Verkhohliadova, T.S.]

Semiconductor electroconductivity of refractory nitrides. Ukr.
fiz. zhur. 8 no.12:1372-1377 D '63. (MIRA 17:4)

1. Khersonskiy pedagogicheskiy institut im. Krupskoy i
Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.

ACCESSION NR: AP4017568 S/0149/64/000/001/0145/0150

AUTHOR: Samsonov, G. V.; Sinel'nikova, V. S.; L'vov, S. N.; Nemchenko, V. P.

TITLE: Physical properties of titanium, zirconium, and vanadium aluminides

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 1, 1964, 145-150

TOPIC TAGS: titanium alloy, zirconium alloy, vanadium alloy, aluminum alloy, aluminide, physical property, electrical conductivity, thermal conductivity, Hall effect, Wiedemann Franz ratio, thermal expansion, hardness, magnetic susceptibility

ABSTRACT: The physical properties determined were resistivity, thermal coefficient of resistivity, coefficient of thermo-emf, Hall constant effective current carrier mobility, effective current carrier concentration, heat conductivity, Wiedemann Franz ratio, coefficient of thermal expansion, microhardness, and magnetic susceptibility. The alloys TiAl,* $TiAl_3$, Zr_3Al, Zr_2Al, $ZrAl_3$, V_5Al_8, VAl_3, VA_6, and VAl_{11} were prepared by arc melting in argon or by sintering from AV000 aluminum and 99.98% pure iodide titanium, zirconium, and vanadium. The greater hardness, lower resistivity, and lower thermal expansion of $TiAl_3$ compared to TiAl indicate greater electron density in the Ti 3d-electron level. The specific conductivity of Zr-aluminides increases as the ratio of Al:Zr increases,

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ACCESSION NR: AP4017568

which process is linked to a gradual electron influx into the Zr d-level. V-aluminides show a similar pattern. Minimum current carrier concentrations and maximum current carrier mobilities for all MeAl$_3$ alloys are noted. Except for Ti-aluminides, the Wiedemann Franz ratio for the alloys was found to be greater than theoretical, which is accounted for by significant lattice contributions to the electrical conductivity. From the donor-acceptor theory, itis concluded that the probability of an Al-valence electron influx into the d-level decreases as the accepting ability of the latter decreases in the order Ti→Zr→V. Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: Institut metallokeramiki i spetsial'ny*kh splavov AN UkrSSR (Institute of Powder Metallurgy and Special Alloys); Khersonskiy pedagogicheskiy institut (Kherson Pedagogical Institute)

SUBMITTED: 19Jul63 ENCL: 00

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ACCESSION NR: AP4042116

AUTHOR: Verkhoglyadova, T. S.; L'vov, S. N.; Nemchenko, V. F.

TITLE: Some properties of the niobium-nitrogen system

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 7, 1964, 667-670

TOPIC TAGS: niobium nitrogen system, niobium nitrogen phase diagram, niobium nitride, niobium nitrogen alloy, alloy physical property, alloy structure

ABSTRACT: A series of niobium-nitrogen alloys with a nitrogen content up to 50 at% have been investigated. Alloy specimens were obtained by hot compacting of powders of the required composition at 1850 to 1900C under a pressure of 120—150 kg/cm^2. X-ray diffraction and metallographic analyses showed the existence of a α-solid solution and β-, γ-, ε-, and δ-phases (See Fig. 1 of the Enclosure). The β-phase appears at a nitrogen content of 2.6 at%; it has a region of homogeneity from 23.4 to 33.7 at% N. The γ-phase could not be isolated. The δ-phase was isolated only in specimens rapidly cooled from the compacting temperature. The α-phase, the solid solution

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